<u>REMARKS</u>

This Amendment is filed in response to the Office Action dated March 4, 2004, which has a shortened statutory period set to expire June 4, 2004.

New Abstract Is Provided

Applicants have provided a new Abstract and request that this new Abstract be entered. This Abstract does not exceed the maximum word length and avoids the use of certain terminology cited by the Examiner. Based on this new Abstract, Applicants request reconsideration and withdrawal of the objection to the Specification.

Applicants Address Claim Objections

Applicants have amended Claims 3, 10, and 25 to now recite, "wherein said second pin capacity is a low pin count and said first pin capacity is a high pin count". Applicants have amended Claim 17 to recite, "wherein said low pin capacity is more than 64 pins and said high pin capacity is more than 1000 pins". Based on these amendments, Applicants request reconsideration and withdrawal of the objection to Claims 3, 10, 17, and 25.

Claims 1-29 Are Patentable Over Motika and Omura

Claims 1 8, 15, and 22, as amended, now recite in part, "wherein the number of said scan chains can be greater than one and less than a maximum number of scan chains". As taught by Applicants, configurations of the design may include different pin counts and requirements from the tester. Specification, page 18, lines 4-6. The high pin count of one configuration can include many balanced scan chains for reduced test application time. Specification, page 18, lines 7-9. The low pin count of

another configuration can include fewer and longer scan chains, thereby resulting in a longer test application time. Specification, page 18, lines 9-11. A user-adjustable test mode selector allows reconfiguration of the on-chip circuitry, thereby ensuring compatibility with testers of different pin capacities. Specification, page 16, lines 4-11.

Motika fails to disclose or suggest this limitation and its advantages. Motika teaches that a mode select signal allows for normal LSSD or WRPLBIST test modes. Col. 5, lines 51-53. Thus, referring to Fig. 2 of Motika, in the LSSD mode, the multiplexers are set to essentially form one serpentine scan chain having a length of all the scan chains. In contrast, in the WRPLBIST test mode, the multiplexers are set to provide weighted random patterns (WRPs) to each of the scan chains. Thus, the number of scan chains in this mode is equal to the maximum number of scan chains.

Omura fails to remedy the deficiencies of Motika. Specifically, Omura fails to teach altering the number of pins required to test a device under test by reconfiguring the individual length and number of scan chains based on a mode signal, wherein the number of scan chains can be greater than one and less than a maximum number of scan chains.

Because Motika and Omura fail to disclose or suggest the recited limitation, much less its advantages, Applicants request reconsideration and withdrawal of the rejection of Claims 1, 8, 15, and 22.

Claims 2-7 depend from Claim 1 and therefore are patentable for at least the reasons provided for Claim 1. Based on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 2-7.

Claims 9-14 depend from Claim 8 and therefore are patentable for at least the reasons provided for Claim 8. Based

on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 9-14.

Claims 16-21 depend from Claim 15 and therefore are patentable for at least the reasons provided for Claim 15. Based on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 16-21.

Claims 23-29 depend from Claim 22 and therefore are patentable for at least the reasons provided for Claim 22. Based on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 23-29.
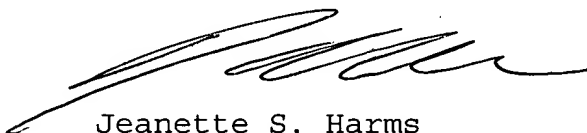
Moreover, Claims 7, 14, and 21, as amended, recite, "a protocol unit coupled to said mode signal and comprising a first test sequence used for said tester of said first pin capacity and a second test sequence used for said tester of said second pin capacity". Motika teaches that the WRP patterns are generated by the tester exernally to the DUT and loaded via the shift register inputs (SRIs) into the chip's shift register latches (SRLs). Col. 4, lines 63-66. Applicants note that the global weight set select register 138 (cited in the Office Action as teaching this protocol unit) fails to include the first and second test sequences. Omura fails to remedy the deficiency of Motika. Therefore, Applicants request further reconsideration and withdrawal of the rejection of Claims 7, 14, and 21.

CONCLUSION

Claims 1-29 are pending in the present Application. Reconsideration and allowance of these claims is respectfully requested.

If there are any questions, please telephone the undersigned at 408-451-5907 to expedite prosecution of this case.

Respectfully submitted,

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